



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,014	08/24/2001	Mark Henrik Sandstrom	23010-11153	1123
758	7590	07/24/2007		
FENWICK & WEST LLP SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			EXAMINER MOORE JR, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			07/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

SK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/938,014	SANDSTROM, MARK HENRIK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael J. Moore, Jr.	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/16/07 has been entered.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 7/2/07 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, after further consideration, it is unclear from the claim language what the claimed "network system" and "packet-switching network elements" comprise. Further clarification of the current claim language is suggested.

### ***Claim Rejections - 35 USC § 102***

Art Unit: 2616

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims **1, 3-6, and 8** are rejected under 35 U.S.C. 102(e) as being anticipated by Livermore et al. (U.S. 6,542,511) (hereinafter “Livermore”). *Livermore* teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **1**, “a network system for interconnecting a set of packet-switching network elements” is anticipated by the fully meshed network (network system) shown in Figure 4 that interconnects nodes 12 (packet-switching network elements) as spoken of on column 6, lines 5-9.

“The network system comprising a set of nodes, each node configured to interface with one of the packet-switching network elements and providing a connection of variable capacity to the other nodes of the network system” is anticipated by the node controllers 44 (nodes) located within nodes 12 as shown in Figure 8 that control a common pool of network capacity through links among the nodes 12 whose capacities are dynamically adjustable (variable capacity) as spoken of on column 3, lines 37-40 and column 8, lines 41-46.

“Each one of the connections configured to transport data from its source node to its destination node and having an associated capacity and traffic load” is anticipated by

Art Unit: 2616

the paths (connections) of variable capacity for each node pair (source/destination nodes) that carry multiple classes of traffic (traffic load) as spoken of on column 3, lines 4-9.

Lastly, “the capacity of each connection controlled directly from its destination node based at least in part on the traffic loads associated with the connections configured to transport data to that destination node” is anticipated by the control of the QoS and end-to-end capacity allocation by the destination nodes based on the traffic distribution among the end nodes as spoken of on column 3, lines 50-62, as well as column 8, lines 54-58.

Regarding claim 3, “wherein the traffic loads and the capacities associated with the connections between the set of nodes are dynamic variables” is anticipated by the paths (connections) of variable capacity for each node pair (source/destination nodes) that carry multiple classes of traffic (traffic load) as spoken of on column 3, lines 4-9.

Regarding claim 4, “where the capacities of the connections are cyclically optimized with a cycle time that is constant during regular system operation” is anticipated by the periodic (cyclic) monitoring and adjustment of connection capacity spoken of on column 7, lines 24-37.

Regarding claim 5, “wherein a number, up to all, of the nodes are physically located at a single physical platform or are attached to a single chassis” is anticipated by the node controllers 44 (nodes) located within nodes 12 (single physical platform) as shown in Figure 8.

Regarding claim 6, "wherein one or more of the nodes are integrated into their associated packet-switching network elements" is anticipated by the node controllers 44 (nodes) located within nodes 12 (single physical platform) as shown in Figure 8.

Regarding claim 8, "wherein one or more of the packet-switching network elements comprises a network system as defined in claim 1" is anticipated by the fully meshed network (network system) shown in Figure 4 that interconnects nodes 12 (packet-switching network elements) as spoken of on column 6, lines 5-9.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Livermore et al. (U.S. 6,542,511) (hereinafter "Livermore") in view of Dai et al. (U.S. 6,246,692) (hereinafter "Dai").

Regarding claim 2, *Livermore* teaches the network system of claim 1. *Livermore* does not teach where the network system is configured to set the capacity of a connection to zero when the connection has no traffic load associated therewith and traffic loads associated with other connections to the same destination node cumulatively exceed a predefined limit.

However, *Dai* teaches a packet switching fabric 10 coupled to a plurality of network nodes via links 15 in Figure 1, where after a last burst of packet data in a

channel is read out (no remaining load), the channel bandwidth (capacity) for that particular channel is released as spoken of on column 11, lines 46-50.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the bandwidth teachings of *Dai* with the system of *Livermore* in order to release bandwidth from unneeded connections for reallocation to connections needing additional capacity.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Livermore* et al. (U.S. 6,542,511) (hereinafter "*Livermore*") in view of *Lemieux* (U.S. 6,631,128).

Regarding claim 7, *Livermore* teaches the network system of claim 1. *Livermore* does not teach where the system is at least in part a sub-network of a multi-use or public network, with additional network elements, which do not actively participate in the operation of the thus created sub-network, in pass-through mode either in between the nodes or in between the packet-switching network elements and the nodes of the sub-network.

However, *Lemieux* teaches a topology optimization method where a core network 30 (sub-network) of Figure 1, in a mesh configuration similar to the network of *Livermore*, is used to provide service to stations 16 (additional network elements).

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to use the system of *Livermore* to provide service for user devices as in *Lemieux* in order to provide multi-class traffic (voice, video, data) service to end users.

### ***Response to Arguments***

Art Unit: 2616

10. Applicant's arguments with respect to *amended* claims **1-8** have been considered but are moot in view of the new ground(s) of rejection provided above.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached at (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Moore, Jr.  
Examiner  
Art Unit 2616

mjm *MM*

*Wing F. Chan*  
7/19/07  
WING CHAN  
SUPERVISORY PATENT EXAMINER